

**Lab-Aids Correlations for**  
**South Carolina College- and Career-Ready Science Standards 2021**  
**MIDDLE SCHOOL LEVEL – GRADES 6-8**

*Din Seaver, Curriculum Developer and Project Manager, Lab-Aids*  
*Mark Koker, Ph D, Chief Academic Officer, Lab-Aids*

This document is intended to show how the SEPUP 3rd edition materials align with the South Carolina College- and Career-Ready Science Standards 2021.

**ABOUT OUR PROGRAMS**

Lab-Aids has maintained its home offices and operations in Ronkonkoma, NY, since 1963. We publish over 200 kits and core curriculum programs to support science teaching and learning, grades 6-12. All core curricula support an inquiry-driven pedagogy, with support for literacy skill development and with assessment programs that clearly show what students know and are able to do as a result of program use. All programs have extensive support for technology and feature comprehensive teacher support. For more information, please visit [www.lab-aids.com](http://www.lab-aids.com) and navigate to the program of interest.

**SEPUP**

Materials from the Science Education for Public Understanding Program (SEPUP) are developed at the Lawrence Hall of Science, at the University of California, Berkeley, and distributed nationally by Lab-Aids, Inc. Since 1987, development of SEPUP materials has been supported by grants from the National Science Foundation and other public and private sources. SEPUP programs include student books, equipment kits, teacher materials, and online digital content. The suggested sequence of units for South Carolina from *Issues and Science Redesigned for the NGSS* is shown below.

<b>Sixth Grade</b>	<b>Seventh Grade</b>	<b>Eighth Grade</b>
Energy	Chemistry of Materials	Force and Motion
From Cells to Organisms	Chemical Reactions	Fields and Interactions
Body Systems	Ecology	Waves
Geological Processes	Earth's Resources	Reproduction
Weather and Climate	Land, Water, and Human Interactions	Evolution
		Solar System and Beyond

*Physical Science, Life Science, Earth Science*

---

## ABOUT THE LAB-AIDS CITATIONS

*Citations included in the correlation document are as follows:*

SEPUP Unit title     *The Chemistry of Materials*  
Activity Number     2, 12, 14\*

\* indicates where Performance Expectation is assessed

KCCRSS/NGSS Performance Expectation	MS-PS1-2
Science and Engineering Practice	Planning and Carrying Out Investigations
Crosscutting Concept	Structure and Function
Disciplinary Core Idea	MS-PS1.A
Common Core English-Language Arts	RST.6-8.3
Common Core Mathematics	MP.2

# SIXTH GRADE

Performance Expectation	SEPUP Unit and Activity Number	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Common Core ELA/Math
<b>Matter and Its Interactions (PS1)</b>					
<b>6-PS1-4. Develop and use a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.</b>	<i>Chemistry of Materials: 8, 9, 10*</i>	Constructing Explanations and Designing Solutions  Developing and Using Models  Engaging in Argument from Evidence  Planning and Carrying Out Investigations	MS-PS1.A MS-PS3.A	Cause and Effect	RST.6-8.3
<b>Energy (PS3)</b>					
<b>6-PS3-3. Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.</b>	<i>Energy: 1, 7, 8, 10, 11, 12, 13*</i>	Analyzing and Interpreting Data  Connections to the Nature of Science  Constructing Explanations and Designing Solutions  Obtaining, Evaluating, and Communicating Information  Planning and Carrying Out Investigations	MS-ETS1.A MS-ETS1.B MS-PS3.A MS-PS3.B	Cause and Effect  Connections to the Nature of Science  Energy and Matter  Patterns  Scale, Proportion, and Quantity  Structure and Function  Systems and System Models	RST.6-8.1 RST.6-8.3 SL.8.4 WHST.6-8.9  EE.6.A.2 EE.6.C.9 MP.2
<b>6-PS3-4. Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic</b>	<i>Energy: 1, 4, 6, 7, 8*</i>	Analyzing and Interpreting Data  Connections to the Nature of Science  Constructing Explanations and	MS-PS3.A MS-PS3.B MS-PS3.C	Cause and Effect  Energy and Matter Patterns Scale, Proportion, and Quantity	RST.6-8.3 WHST.6-8.1 WHST.6-8.9  EE.6.C.9 MP.2

Performance Expectation	SEPUP Unit and Activity Number	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Common Core ELA/Math
energy of the particles as measured by the temperature of the sample.		Designing Solutions  Engaging in Argument from Evidence  Planning and Carrying Out Investigations		Systems and System Models	
<b>Waves and Their Applications in Technologies for Information Transfer (PS4)</b>					
<b>6-PS4-2. Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.</b>	Waves: 3, 4, 8, 9, 10, 11, 12, 13*	Analyzing and Interpreting Data  Connections to the Nature of Science  Developing and Using Models  Obtaining, Evaluating, and Communicating Information  Planning and Carrying Out Investigations  Using Mathematics and Computational Thinking	MS-PS4.A MS-PS4.B	Connections to Engineering, Technology, and Applications of Science  Patterns  Structure and Function	RST.6-8.1 RST.6-8.3 RST.6-8.9  MP.2
<b>From Molecules to Organisms: Structures and Processes (LS1)</b>					
<b>6-LS1-1. Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.</b>	From Cells to Organisms: 1, 2, 3, 4, 9*	Analyzing and Interpreting Data  Connections to the Nature of Science  Constructing Explanations and Designing Solutions  Developing and Using Models  Engaging in Argument from Evidence  Obtaining, Evaluating, and Communicating	MS-LS1.A MS-LS1.C MS-PS3.D	Cause and Effect  Connections to Engineering, Technology, and Applications of Science  Connections to the Nature of Science  Energy and Matter Patterns	RST.6-8.3 RST.6-8.7 RST.6-8.9 WHST.6-8.2 WHST.6-8.7 WHST.6-8.9 SL.8.5

Performance Expectation	SEPUP Unit and Activity Number	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Common Core ELA/Math
		Information  Planning and Carrying Out Investigations  Using Mathematics and Computational Thinking		Scale, Proportion, and Quantity  Structure and Function  Systems and System Models	
<b>6-LS1-2. Develop and use a model to describe the function of a cell as a whole and ways the parts of cells contribute to the function.</b>	<i>From Cells to Organisms: 6, 7, 8*</i>	Analyzing and Interpreting Data  Connections to the Nature of Science  Constructing Explanations and Designing Solutions  Developing and Using Models  Obtaining, Evaluating, and Communicating Information Planning and Carrying Out Investigations	MS-LS1.A	Connections to Engineering, Technology, and Applications of Science  Connections to the Nature of Science  Scale, Proportion, and Quantity  Structure and Function  Systems and System Models	RST.6-8.3 RST.6-8.7 RST.6-8.9 WHST.6-8.2 WHST.6-8.7 WHST.6-8.9 SL.8.5
<b>6-LS1-3. Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.</b>	<i>From Cells to Organisms: 10, 14, 15</i>	Analyzing and Interpret Data  Constructing Explanations and Designing Solutions  Engaging in Argument from Evidence  Obtaining, Evaluating, and Communicating Information  Using Mathematics and	MS-LS1.A	Cause and Effect  Connections to Engineering, Technology, and Applications of Science  Connections to the Nature of Science  Patterns	RST.6-8.2 RST.6-8.3 RST.6-8.7 RST.6-8.9 WHST.6-8.9

Performance Expectation	SEPUP Unit and Activity Number	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Common Core ELA/Math
		Computational Thinking		Scale, Proportion, and Quantity	
<b>6-LS1-8. Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.</b>	<i>Body Systems: 6, 7, 8*</i>	Analyzing and Interpreting Data  Obtaining, Evaluating, and Communicating Information  Planning and Carrying Out an Investigation	MS-LS1.D	Cause and Effect	RST.6-8.4  6.SP.B.4
<b>Earth's Place in the Universe (ESS1)</b>					
<b>6-ESS1-4. Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.</b>	<i>Earth's Resources: 9, 10, 11, 12*</i>	Constructing Explanations and Designing Solutions  Developing and Using Models  Planning and Carrying Out Investigations  Connections to the Nature of Science	MS-ESS1.C	Patterns  Scale, Proportion, and Quantity  Stability and Change	RST.6-8.3 WHST.6-8.1 WHST.6-8.9
<b>Earth's Systems (ESS2)</b>					
<b>6-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.</b>	<i>Geological Processes: 2, 5, 8, 9, 10, 11, 13, 14, 15*</i>	Analyze and Interpret Data  Asking Questions and Defining Problems  Connections to the Nature of Science  Constructing Explanations and Designing Solutions  Developing and Using Models	MS-ESS1.C MS-ESS2.A MS-ESS2.B MS-ESS2.C MS-ESS3.A MS-ESS3.B	Cause and Effect  Connections to Engineering, Technology, and Applications of Science  Connections to the Nature of Science  Energy and Matter	RST.6-8.2 RST.6-8.3 RST.6-8.4 WHST.6-8.1 WHST.6-8.2 SL.8.1  6.RP.A.1 MP.2

Performance Expectation	SEPUP Unit and Activity Number	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Common Core ELA/Math
		Engaging in Argument from Evidence  Obtaining, Evaluating, and Communicating Information  Planning and Carrying Out Investigations  Using Mathematics and Computational Thinking		Patterns  Scale, Proportion, and Quantity  Stability and Change  Structure and Function  Systems and System Models	
<b>6-ESS2-2. Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.</b>	<i>Geological Processes: 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13*</i>	Analyze and Interpret Data  Asking Questions and Defining Problems  Connections to the Nature of Science  Constructing Explanations and Designing Solutions  Developing and Using Models  Engaging in Argument from Evidence  Obtaining, Evaluating, and Communicating Information  Planning and Carrying Out Investigations  Using Mathematics and Computational Thinking	MS-ESS1.C MS-ESS2.A MS-ESS2.B MS-ESS2.C MS-ESS3.A MS-ESS3.B	Cause and Effect  Connections to Engineering, Technology, and Applications of Science  Connections to the Nature of Science  Energy and Matter  Patterns  Scale, Proportion, and Quantity  Stability and Change  Structure and Function  Systems and System Models	RST.6-8.1 RST.6-8.2 RST.6-8.3 WHST.6-8.1 WHST.6-8.2 WHST.6-8.9 SL.8.1  6.RP.A.1 6. NS.C.5 7. RP.A.2 MP.4

Performance Expectation	SEPUP Unit and Activity Number	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Common Core ELA/Math
<b>6-ESS2-3. Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.</b>	<i>Geological Processes: 10, 11, 12, 13, 14*</i>	Analyze and Interpret Data  Connections to the Nature of Science  Constructing Explanations and Designing Solutions  Developing and Using Models  Engaging in Argument from Evidence  Planning and Carrying Out Investigations  Obtaining, Evaluating, and Communicating Information	MS-ESS1.C MS-ESS2.A MS-ESS2.B MS-ESS3.B	Cause and Effect  Connections to the Nature of Science  Patterns  Scale, Proportion, and Quantity  Stability and Change  System and System Models	RST.6-8.2 WHST.6-8.1 WHST.6-8.2 SL.8.1  6.RP.A.1 7.RP.A.2 MP.2
<b>6-ESS2-4. Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.</b>	<i>Land, Water, and Human Interactions: 2, 5, 7, 8, 9*</i>	Asking Questions and Defining Problems  Constructing Explanations and Designing Solutions  Developing and Using Models  Planning and Carrying Out Investigations	MS-ETS1.A MS-ESS2.A MS-ESS2.C MS-ESS3.C MS-PS2.A	Cause and Effect  Connections to Engineering, Technology, and Applications of Science  Energy and Matter  Scale, Proportion, and Quantity  Stability and Change	RST.6-8.1 RST.6-8.3 RST.6-8.9 WHST.6-8.2
<b>6-ESS2-5. Analyze and interpret data to provide evidence for how the motions and complex interactions</b>	<i>Weather and Climate: 2, 3, 7, 9, 10, 11, 12, 13*</i>	Analyzing and Interpreting Data  Asking Questions and Defining Problems	MS-ETS1.B MS-ETS1.C MS-ESS2.C MS-ESS2.D MS-ESS3.D	Cause and Effect  Connections to Engineering,	RST.6-8.3 RST.6-8.7 RST.6-8.9 WHST.6-8.7 SL.8.1



Performance Expectation	SEPUP Unit and Activity Number	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Common Core ELA/Math
of air masses result in changes in weather conditions.		<p>Connections to the Nature of Science</p> <p>Constructing Explanations and Designing Solutions</p> <p>Developing and Using Models</p> <p>Engaging in Argument from Evidence</p> <p>Planning and Carrying Out Investigations</p>	MS-LS4.C	<p>Technology, and Applications of Science</p> <p>Connections to the Nature of Science</p> <p>Energy and Matter</p> <p>Patterns</p> <p>Structure and Function</p> <p>System and System Models</p>	<p>SL.8.4</p> <p>MP.2</p>
6-ESS2-6. Develop and use models to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.	Weather and Climate: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14*	<p>Analyzing and Interpreting Data</p> <p>Asking Questions and Defining Problems</p> <p>Connections to the Nature of Science</p> <p>Constructing Explanations and Designing Solutions</p> <p>Developing and Using Models</p> <p>Engaging in Argument from Evidence</p> <p>Planning and Carrying Out Investigations</p>	<p>MS-ESS2.C</p> <p>MS-ESS2.D</p> <p>MS-ESS3.D</p> <p>MS-LS4.C</p> <p>MS-PS3.B</p>	<p>Cause and Effect</p> <p>Connections to Engineering, Technology, and Applications of Science</p> <p>Connections to the Nature of Science</p> <p>Energy and Matter</p> <p>Patterns</p> <p>Systems and System Models</p>	<p>RST.6-8.3</p> <p>RST.6-8.7</p> <p>WHST.6-8.7</p> <p>SL.8.1</p> <p>SL.8.4</p> <p>MP.2</p>
<b>Earth and Human Activity (ESS3)</b>					
6-ESS3-2. Analyze and interpret data on natural hazards to identify patterns which help forecast future	Geological Processes: 1, 3, 4, 6, 7, 8, 11, 18*	<p>Analyzing and Interpreting Data</p> <p>Asking Questions and Defining Problems</p>	<p>MS-ESS1.C</p> <p>MS-ESS2.A</p> <p>MS-ESS2.C</p> <p>MS-ESS3.B</p>	<p>Cause and Effect</p> <p>Connections to Engineering,</p>	<p>RST.6-8.1</p> <p>RST.6-8.2</p> <p>RST.6-8.3</p> <p>RST.6-8.4</p> <p>WHST.6-8.1</p>

Performance Expectation	SEPUP Unit and Activity Number	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Common Core ELA/Math
catastrophic events and inform the development of technologies to mitigate their effects.		<p>Connections to the Nature of Science</p> <p>Constructing Explanations and Designing Solutions</p> <p>Developing and Using Models</p> <p>Engaging in Argument from Evidence</p> <p>Obtaining, Evaluating, and Communicating Information</p> <p>Using Mathematics and Computational Thinking</p>		<p>Technology, and Applications of Science</p> <p>Connections to the Nature of Science</p> <p>Patterns</p> <p>Scale, Proportion, and Quantity</p> <p>Stability and Change</p> <p>Structure and Function</p> <p>Systems and System Models</p>	<p>WHST.6-8.2 WHST.6-8.9 SL.8.1</p> <p>6.NS.C.5 MP.2 MP.4</p>